**BROOKHAVEN NATIONAL LABORATORY**
**RHIC PROJECT**
**RADIATION SAFETY COMMITTEE**

**To:** Distribution
**From:** A. Etkin
**Date:** June 17, 1999
**Subject:** Radiation Safety Sub-Committee Meeting Minutes – Critical Devices - RHIC

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Attending:-

A. Etkin
W. MacKay
S. Musolino

The RSC Sub-Committee met on June 15, 1999 and reviewed and recommended approval of the attached list of critical and reachback devices for the RHIC Ring and Injection Line.

Distribution:- RSC, R. Frankel, File, M. Harrison, D. Lowenstein, S. Ozaki, T. Robinson

# Summary of Critical Devices

| Access to Region | Crit Dev #1 | Crit Dev #2 | Reach Back #1 | Reach Back #2 |
|---|---|---|---|---|
| Uup, VT | AGSEN1 | AGSEN2 | AGSRB1 | AGSRB2 |
| Udn, VP | psuarc4 ac<br>psuarc4 dc | H10 septum | AGSEN1 | AGSEN2 |
| V1, D6, Muon | V1D1 | V1D2 | AGSEN1 | AGSEN2 |
| Wdn | psuarc8 | pswarc20 | AGSEN1* | AGSEN2* |
| X, Y | psuarc8,<br>g12-bsx.1 | pswarc20,<br>g12-bsx.2 | AGSEN1,<br>g12-bsx.3 | AGSEN2 |
| RHIC (beam) | g12-bsx.1,<br>psswm | g12-bsx.2,<br>psxarc90,<br>psyarc90 | g12-bsx.3,<br>pswarc20 | psuarc8 |
| RHIC (rf only)<br>Zones: 3z1, 4z1 | anode supplies<br>(AC) | anode supplies<br>(short on output) | | |

## Notes:

1. Dropping AGSEN1 will disable either
   1. the booster extraction magnets: BF6 and BDH2,3

   or
   2. the four beam stops: TTB1, TTB2, LTB1, and LTB2.

   (The reason for this choice is to allow beam into the Booster if the extraction magnets are disabled; however, if the extraction magnets are on, then it is less stressful on the power supplies to inhibit booster injection.)
2. The action of AGSEN2 is identical to AGSEN1, but provides an independent, redundant path.
3. AGSRB1 causes all four beam stops (TTB1, TTB2, LTB1, and LTB2) to close.
4. AGSRB2 is similar to AGSRB1, but provides an indepenent, redundant path.
5. The four paths for AGSEN1, AGSEN2, AGSRB1, and AGSRB2 should be completely independent.
6. Reachbacks for the Wdn are currently AGSEN1 and AGSEN2, but a change to psuarc4 and the H10 septum has been authorized to be implemented at a future date.

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*Mangled by Waldo MacKay (waldo@bnl.gov).*
Last update: Tuesday, June 15, 1999 16:28:36